MEDICAL AND SURGICAL REPORTER

No. 1760. PHILADELPHIA, NOVEMBER 22, 1890. VOL. LXIII.—No. 21.

CLINICAL LECTURE.

DIGITALIS IN VALVULAR DISEASE OF THE HEART.[1]

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The patient before you, a colored man æt. about 60, when admitted a few weeks ago, presented every symptom of failing cardiac action. There was intense dyspnœa, amounting in fact to orthopnœa; the lungs were congested; the pulse was rapid, feeble and irregular, and there was general anasarca. The legs were enormously swollen; there was some ascites, and over the sternum the finger on pressure seemed to bury itself in the waterlogged tissues. Another most significant fact was that the urine was greatly diminished, amounting at the time of admission and for a day or two thereafter, to about fifteen ounces per diem. The cause of the alarming symptoms to which I have just referred is plainly evident. On examining the heart I found a distinct blowing murmur, synchronous with the first sound, and heard with greatest intensity over the apex beat, which is somewhat outside of and below the usual situation. This same murmur may also be heard in the left axillary region as far back as the anterior border of the latissimus dorsi muscle. The three cardinal points of this murmur and, in fact of all murmurs, viz., the time of its occurrence, the area of its greatest intensity, and the direction of its transmission indicate unmistakably a condition of mitral insufficiency. At each ventricular systole a certain amount of blood regurgitates into the left auricle, and as a matter of course interferes with the pulmonary circulation. Such backward pressure is more serious in the pulmonary than in the general circulation, because the veins of the former are destitute of valves and pursue an unusually straight course.

In the case before us the symptoms of failing cardiac action arose suddenly, although the lesion on which they depend is an old one. In other words, they represent an acute exacerbation of a chronic ailment. In every acute affection which you are called upon to treat, you should endeavor to ascertain whether the disease has originated *de novo* or has for its foundation some organic defect. You can readily understand without my giving you any special examples, how the prognosis of permanent recovery will vary in accordance with the result of such examination.

Compensation in this case was well maintained until a certain day, a few weeks ago, on which the man was employed in cleaning out a cold, damp cellar. It was worse than damp, for he tells us that while engaged in this work, he was standing in cold water. Immediately after this exposure the symptoms above mentioned made their appearance and had their origin in the circulatory point of least resistance, *i. e.*, the pulmonary vessels, which were already in a state of chronic congestion. There was nothing inflammatory in the nature of this attack, as is proved by the temperature, which has been, as you may see by this chart, persistently subnormal. The prolonged impression of cold upon the cutaneous vessels—in a word, the chill—was enough to give the balance of circulatory power to the veins. There is a certain physiological antagonism between the arterial and venous systems, the maintenance of which is essential to a perfect circulation. The tendency of every variety of valvular heart disease is to destroy this antagonism and the object of treatment is to restore it. In

[1] Delivered at the Philadelphia Hospital, Nov. 12, 1890.

the case before us this antagonism was lost: the arteries had given up the struggle; their tension was relaxed; in short, the whole circulation was of a venous type. This was indicated especially by the subnormal temperature, the scanty secretion of urine, and finally by the general anasarca. The object of treatment was to strengthen the heart, and at the same time to increase the arterial tension. This has been most successfully accomplished by a drug—digitalis—which, except in rare instances of unusual susceptibility or idiosyncrasy, is still *facile princeps* among cardiac tonics. There are certain facts concerning this drug and its indications to which I will refer in connection with this case in which its employment has been so successful. Useful therapeutic hints may be obtained by looking a little more closely into its clinical history. In the first place I would lay special emphasis on the fact that the signs of failing compensation appeared suddenly, and were manifestly due to exposure to cold and wet. Up to the time of such exposure, the circulation was well maintained: decidedly better than it now is under the influence of digitalis. These two facts, viz., the sudden onset of pulmonary congestion and general anasarca, as well as the prompt improvement under treatment, prove beyond doubt that there is a great deal of healthy muscular fibre in this man's heart. If there were not, digitalis would be of little or no use, for it can no more act in the absence of muscular fibre than can an electric current traverse a divided nerve. The first requisite then to the successful employment of digitalis, is the presence of more or less healthy muscular fibre. Is there any method by which we can judge of the degree to which degeneration of cardiac muscular fibre has advanced? We are justified in referring the presence of considerable healthy fibre if the first sound is, as in health, *relatively* louder, deeper toned, and more prolonged than the second, and if the apex beat, instead of being diffuse and fluttering, is sharply defined and plainly palpable. Again, a distinct murmur can only be produced by a heart acting with considerable force, so that a faint murmur coinciding with signs of failing compensation is of more serious import than a distinct one. The response to appropriate treatment is, however, the best of all tests of the condition of the cardiac muscle.

Another indication for the employment of digitalis which was distinctly present in this case, is weakness and irregularity of the pulse. Withering, who wrote a treatise on digitalis towards the close of the last century, and who probably did more than any one else to bring the drug into judicious use, had the sagacity to perceive that it is much more efficacious when the pulse is feeble and intermittent than when it is hard and regular. Although the phrases "high and low arterial tension" were not then invented, the treatment of this keen observer was just as skilful as though they were.

The next question we have to consider is: whether the success which followed the use of digitalis in this case was due to the nature of the lesion, or, to express it in more general terms, whether the indications for the employment of digitalis in cardiac disease depend upon the valve affected and the nature of the circulatory disturbance to which it gives rise. This question has given rise to a great deal of profitless discussion, owing to the fact that most of the so-called observers have approached their cases of heart disease with preconceived opinions derived from authoritative teachers. For example, Grisolle, one of the most distinguished physicians of his time, declared digitalis to be not only useless but injurious in all such cardiac valvular lesions as give rise to stenosis. In 1867, Selion,[1] in his inaugural thesis, expresses an opinion exactly the reverse, for he says that digitalis is indicated in stenosis of the valvular orifices; contra-indicated in those which give rise to insufficiency.

In 1877 Milner Fothergill adopts the same view so far as aortic stenosis is concerned. Digitalis, says Fothergill,[2] is "useful in aortic stenosis. By exciting a more powerful ventricular contraction it enables a larger amount of blood to be driven through a narrowed orifice in an equal time, thus establishing a new equilibrium."

Niemeyer, on the other hand, held that digitalis was, as a rule, contra-indicated in aortic stenosis, and advised that in this form of heart lesion it should only be employed in cases in which compensation is failing or the action of the heart is so rapid as to prevent the proper discharge of the contents of the left ventricle.

The same differences of opinion have prevailed with reference to the use of digitalis

[1] Quoted by Huchard.
[2] *British Medical Journal*, Oct. 13, 1877.

in lesions of the mitral orifice. Niemeyer advised its use in mitral stenosis, on the ground that by slowing the action of the heart it gave the left auricle more time in which to discharge its contents into the left ventricle. On the other hand, Potain maintained that it was in just these cases of mitral stenosis that digitalis could be most easily dispensed with.

Gubler, a well-known French authority, held that both in mitral insufficiency and stenosis, little benefit was to be derived from digitalis.

These are but a tithe of the contradictory statements with reference to the best cardiac tonic in the Pharmacopœia. Can they be reconciled, and, if so, in what manner? Certainly not by endeavoring to impeach the testimony of the distinguished men I have quoted. They are all partly right, and therefore none of them entirely wrong. The cause of their discrepant statements concerning the action of digitalis is to be found in the stage of the disease in which they employed it. In the same case of valvular heart disease, digitalis may be found decidedly injurious in one stage, useless in another, and decidedly beneficial in the third. With reference to the action of digitalis, cardiac valvular disease has been divided into three stages: 1. Eusystole. 2. Hypersystole. 3. Hyposystole. In the first, compensation is fully made for the valvular defect. There is no dyspnœa except in decided exertion; no palpitation; no cough; no œdema, or any other sign of venous stasis. In such a case digitalis is not indicated; it is absolutely useless and might be injurious. The only treatment to be advised is of a strictly hygienic nature.

At a later stage of the same case the symptoms will have undergone a very decided change. The heart has enlarged; there is a tendency to active congestion, manifested by fulness in the head, cephalalgia, tinnitus aurium, vertigo and insomnia. The impulse of the heart is powerful and outside of and below its normal situation, while the pulse is full and resistant. Under such circumstances as these, digitalis is decidedly injurious, and since this stage is more pronounced in cases of aortic disease, especially aortic regurgitation, the hasty inference has been made that digitalis is injurious in all cases and stages of aortic lesion. The bromides, morphia and aconite are the drugs for this stage of valvular disease, but the most important rôle is still to be assigned to hygiene. A bland diet, of which the only animal ingredients are milk and eggs, should be prescribed, and a rigid abstinence from alcoholic liquors, tea, coffee and tobacco, enforced. The stage just described is the stage of *hypersystole.*

The stage of *hyposystole* may be said to begin when there is dyspnœa on slight exertion or even in ordinary conversation, œdema about the ankles, at first only observed at night on retiring, and a scanty secretion of urine. There will also be failure of appetite and other signs of digestive disturbance due to disordered circulation of the gastro-intestinal tract. In fact digestive disorders are so frequently prominent that cardiac dyspepsia is a well-recognized morbid condition. These symptoms coincide with diminished arterial tension; perhaps also with feebleness, irregularity and intermittence of the pulse. It is in this stage of heart disease that digitalis is employed with the most brilliant results; and as this stage may be reached in any case of heart disease, irrespective of the valve affected, it follows that the true indications for this drug are found rather in the symptoms of cardiac affections than in their physical signs.

It is undoubtedly the case that certain valvular affections are, as a rule, more benign in their course than others, and may last for years without giving rise to any symptoms, the patient finally dying of some intercurrent affection. The indications for digitalis in such cases may never arise unless, as in the case before us, exposure to cold and wet, or other depressing causes, may induce a state of acute cardiac insufficiency. The facts above mentioned afford the only satisfactory explanation of the discrepant statements with reference to the employment of digitalis in heart disease.

I trust I have made it plain that the indications for digitalis are to be found only in the functional capacity of the cardiac muscle. When it is working regularly and overcoming the valvular obstruction without exhausting the reserve force inherent in every heart, digitalis is useless and may be injurious. When the heart is excited in its action; that is, when it is making superfluous efforts to overcome the obstruction, provided this coincides with increased arterial tension, digitalis is decidedly injurious. When the arterial tension is low, and the whole circulation is approaching a venous type, digitalis is decidedly beneficial. These statements apply to all cases of heart disease,

irrespective of the particular valve or valves involved.

On prescribing digitalis in a given case and obtaining no immediate benefit from it, you should not hastily conclude that it is worthless. Although the fact is denied by some, there can, I think, be no doubt that the action of this drug is cumulative. In the case before us the daily urinary secretion on admission was fifteen ounces, and it was not until digitalis had been administered for a considerable period—about forty-eight hours—that the urine was greatly increased in amount. At the end of the period referred to, it reached the high figure of 125 ounces.

There are certain effects of digitalis which are often attributed by the inexperienced to the disease for which it is prescribed. For example, while slowing and strengthening the pulse, it often makes it very unstable, so much so that the least excitement will cause it to increase in frequency at the rate of from twenty to thirty beats per minute. The same result is produced by slight muscular exertion, such as turning over in bed. For these reasons the best results from digitalis are obtained by keeping the patient at rest while he is taking it. When the circulatory equilibrium is thoroughly restored by the use of this drug, the patient may be allowed to rise, and take a proper amount and kind of exercise.

In cardiac disease, especially when the patient is taking digitalis, the physician should never neglect to compare the number of the pulse beats with those of the heart. Cases are now and then met with in which the number of the cardiac pulsations is greater than the number of pulsations in the radial artery. This is due to the fact that some of the cardiac contractions are abortive, or if not entirely so, are too feeble to cause a palpable pulse at the wrist. The number of the heart beats may be exactly double those of the radial artery; and, according to some authorities, this is due to an asynchronous contraction of the two sides of the heart. I have published a case[1] in which, in my opinion, this condition undoubtedly existed. The possibility of the right and left ventricles acting independently of each other has been denied, and when we consider the manner in which the spiral, circular and other muscular fibres, pass from one ventricle over another without any tendinous septa, or other lines of demarcation, it seems difficult to understand how this can occur. However, in the case to which I refer, the sphygmograph recorded two beats of the heart to one of the radial pulse, and the relation of the curves representing the double heart-beats was, in point of volume, just what one would expect from the relative muscular force of the two ventricles.

I mention these peculiarities of cardiac action because they have been attributed to the action of digitalis. The question whether or not they are to be ascribed to this drug, is, in my opinion, an open one. There is one form of cardiac action which is generally agreed to be due to digitalis, and to which reference must be made, lest on observing it you should attribute it solely to the disease. It is a species of regular irregularity manifested by what has been called the "pulsus bigeminus;" that is to say, there will be two rapid beats of the pulse separated by a long interval, and this may continue for hours.

There are many other interesting points concerning the employment of digitalis in heart disease to which reference may be made in subsequent clinics.

[1] *Archives of Medicine*, August, 1881.

COMMUNICATIONS.

A NEW POISON IN CHEESE.

BY VICTOR C. VAUGHAN, M. D.

During the past two or three years we have received at the Hygienic Laboratory of Michigan University a number of samples of cheese which, it was claimed, had caused nausea and vomiting in those eating of them, and in which we were unable to detect tyrotoxicon. Some of these samples produced vomiting and purging in cats and dogs to which the cheese was fed directly. Of course, the evidence that these samples had been the actual cause of the sickness among the people who had eaten of them was confirmed by the experiments upon the animals; but inasmuch as we were unable to detect the poison, we were compelled to report as follows.

"The poisonous character of the cheese has been proven by experiments upon animals, but we have failed to demonstrate the nature of the poison. Tyrotoxicon could not be detected."

One sample of this class was found by my assistant, Dr. Novy, to be very poisonous. Some of this cheese was covered with absolute alcohol, and after standing in a dish for some weeks the alcohol was allowed to evaporate, then 100 grams of the cheese was fed to a young dog and caused its death within a few hours. Sterilized milk to which a small bit of the cheese was added, after standing in the incubator at 35° C. for twenty-four hours, became so poisonous that 100 c. c. of it introduced into the stomach of a full-grown cat caused death. Dr. Novy made plate cultures from the cheese and from the spleen and liver of the dead animals, and succeeded in identifying one germ as common to both. Sterilized milk inoculated with a pure culture of this germ, and kept in the incubator, proved fatal to cats. But with the advent of cold weather the germ lost its toxicogenic properties, which were not restored by subsequent cultivation in the incubator.

In a second class of samples, the poisonous character of the cheese was not confirmed by direct feeding. Cats, rats and dogs were fed with the same quantities as above, without any appreciable effect. The report made upon the samples was as follows.

"Animals fed upon the cheese were not affected. Tyrotoxicon could not be found. The sickness in the people was probably due to some other cause."

The last sentence of this report was probably wrong, as will be shown from the following experiment. Two kilograms of a cheese of this class was extracted repeatedly with absolute alcohol. The part insoluble in alcohol was then extracted with water. The aqueous extract, after filtration, was allowed to fall slowly into three times its volume of absolute alcohol. A voluminous, flocculent precipitate resulted. After twenty-four hours the supernatant fluid was decanted, and the precipitate was dissolved in water and re-precipitated with absolute alcohol; then it was collected and speedily dried on porous plates. A small bit of this precipitate was dissolved in water; and forty drops of this solution, injected under the skin on the back of cats, produced invariably within one hour vomiting and purging. After the partial collapse which followed the vomiting and purging, and which was evidenced by the animal sitting with its chin resting on the floor, recovery gradually followed. The same amount of the solution injected into the abdominal cavity of white rats rendered the animals within ten or fifteen minutes perfectly limp, and the only evidence of life observed was rapid respiratory movements. The rats lay upon their sides, and could be handled without manifesting any attempt at movement. In this condition some died after three or four hours, while others, after lying in this position for from eighteen to twenty-four hours, gradually improved, and after some days seemed to be wholly recovered.

This substance belongs to the so-called poisonous albumins. From its aqueous solutions it is not precipitated by heat or nitric acid, singly or combined. Its solutions respond to the biuret test. It is not precipitated by saturation with sodium sulphate, nor by a current of carbonic acid gas; therefore, it is not a globulin. It is precipitated by saturation with ammonium sulphate; and this fact removes it from the peptones.

That animals were not affected when fed with the whole cheese may be explained by the supposition that they did not in this manner get enough of the poison to affect them. It cannot be said positively that the samples of cheese of the first class mentioned above owe their poisonous properties to this substance. We have not had the opportunity of testing samples of this class since the recognition of the poisonous albumin in those of the second class. Four samples of the latter have been tested for the poisonous albumin with positive results.

It may be found that traces of this poison exist in all samples of green cheese. This point will be investigated.

It is highly probable that the poisonous effects of some samples of sausage and meat are due to similar products of bacterial activity.

FRACTURE THROUGH THE ANATOMICAL NECK OF BOTH HUMERI.

BY WM. C. TODD, M. D.,
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I am induced to report the following case from the extreme rarity of such an injury. I was called in consultation by Dr. S. C. Ingraham, of Wissahickon, in the case of a woman of advanced years, who had had a fall down a cellar stairway, by which both

shoulders were severely injured. The arms were rendered useless, there was severe pain in the region of both shoulder-joints, with some swelling but no apparent shortening or displacement. Distinct crepitus at both joints could be plainly felt on grasping the joint tightly with one hand and making slight movement of the arm with the other. Both arms were carefully bandaged from the fingers up; well-padded metallic splints were fitted to the upper part of the humerus and shoulder, and secured by bandages; flat pads were placed in the axillæ; and the arms were secured to the sides from the shoulders to the elbows, with slings to support the hands and forearms.

The bandages were changed once a week, when the parts were carefully bathed and dried, and precautions were taken to prevent chafing. At first the patient was confined to bed on her back, but afterwards, in the daytime, she used an easy, reclining chair. In six weeks the splints and bandages were removed, and it was found (contrary to our expectation) that union had taken place with fair motion, which we expect to improve in time. Some thickening remains around the heads of the bones, which may possibly be absorbed. The arms were again placed in slings, with directions to gradually resume their use.

There may have been some predisposing cause in this case; but none was apparent, except the age of the patient, who had never suffered before from fracture.

THE DISEASE OF INEBRIETY.

BY T. D. CROTHERS, M. D.,

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It is a curious fact that, notwithstanding all the clinical evidence so easily obtained in the practice of every physician, the disease of inebriety is still denied and doubted by many persons. This is natural in a certain class of physicians, who are always averse to any change of present theories and beliefs, because it requires mental changes and efforts to readjust themselves to new states and conditions. But the medical man who is reckless enough to defend his views in print always reflects his own knowledge of the subject more than the opinions of others. Recently such a man considered it his duty to contradict the fact of disease in inebriety, and to show its absurdity and its conflict with the teachings of the Bible and other experience, citing as authority (which seemed to him conclusive) the opinions of the late Dr. Gray, of Utica, and Dr. Bucknil, of London. Feeling that he had fully established his view of the topic, he gave way to sarcastic strictures upon me and others engaged in the same work, and finally closed with a record of two cases, which to him seemed conclusive. One of these cases came under my care, and thus enabled me to compare the evidence on which he based his denial of the disease of inebriety.

The history of the case, as he described it, was briefly as follows. A. B., a merchant, thirty-four years old, had drank to excess for ten years, had lost his property and was a pauper living on the charities of his friends. He had Christian parents and excellent training, and had been successful in business. He had begun to drink wilfully at first, and continued, notwithstanding all advice and persuasions of his friends. He would promise and pledge himself to abstain, then deliberately plan and determine a drink period, and in the most cunning way deceive his friends. When prevented from going away, or when restrained by the presence of some one, he would abstain for a time; but with the first favorable opportunity he would drink to great excess. The insane-like cunning and methods to procure spirits, while apparently deploring his condition and affirming that he would stop, but making no effort to do so, was proof of vice and immorality, and in no possible way could it be called disease.

A more careful examination showed that A. B.'s grandfather was a periodical inebriate, that one uncle was insane, and that his father suffered from attacks of melancholy at intervals, and his mother was a pronounced neurotic. From early life the patient had periods of insomnia and was always untruthful and unable to concentrate his mind on one thing long. He probably drank at first to keep up in business, and afterwards drank according to time and opportunity. He inherited a neurotic diathesis and a special tendency to exhaustion, for which alcohol was a most grateful means of relief. He was also of defective brain organization and was unstable, emotional and childish in his methods of deception. He would agree to any theory that explained his conduct and join in any methods and plans

for his relief, and at the same time carry on an intrigue to procure and use spirits. On one occasion he partook of the sacrament, as a most devout convert, and that night broke into the church and stole the wine that remained and drank it in his room. He was clearly a reasoning maniac of the alcoholic type and died of some unknown brain trouble.

The second example used to illustrate the vice of inebriety was a solitary midnight drinker of the dipsomania type, who at intervals retired to some obscure hotel or boarding-house, and drank to stupor at night for a week, then returned and manifested great activity in the temperance cause. At other times he would refuse to see any one in his room at night for days, then come out, giving as an excuse that he was engaged on some literary work. This man was found dead in his room, with many empty spirit bottles about him.

The inebriate, like the insane, always denies that his habit is the result of disease, and insists that he can stop at any time, and when he fails to do so ascribes the failure to some trifling condition of the surroundings. To many superficial observers the statements of such persons are accepted as facts, no matter how much they are contradicted by clinical history. In a noted contested will case, the testator was an extreme prohibitionist and a radical temperance man. He denounced every scientific effort to study these cases as fallacious and mercenary; and yet he was an inebriate and drank in secret. When the drink craze came on he had urgent business in New York city, and would be away a week or more concealed. After one of these unexplained absences, he wrote his will, which was contested, and the fact of his secret drinking came out. A review of his history revealed many very clear indications of disease, in his intemperate life and conduct. He had been implicated in several very unusual transactions, and at times was extremely miserly, or lavishly generous. He often displayed great extremes of conduct and character, and had been under treatment for years for nervous dyspepsia. At one time he was under arrest for setting fire to a saloon. As he was very bitter and vindictive against any one who drank, or sustained the saloon influence, no doubt he was guilty. His mental soundness was certainly questionable for many years, and the will was written after an attack of secret drinking, when his mind was more than usually disturbed; yet the will was sustained.

In a recent case, the disease of inebriety appeared, although it was not recognized, and it has been the subject of much comment. A quiet, studious physician, who was very generous and popular with all his patrons and associates, served one term as a legislator. From this time a total change of character and disposition began. Before this he was an occasional moderate user of spirits, now he drank to excess at intervals, was slanderous, untruthful, intriguing, and irritable. For a period of ten years up to his death, he was a centre of contention, and often committed the most disreputable acts. He was a low politician, and drank to excess at times. At his death, the executors refused to pay certain unusual contracts, on the ground that at the time the contract was made, he was unsound and incapable. The evidence of disease, from the sudden change of his conduct, character and disposition, associated with the excessive use of spirits, was not recognized by the court and jury, and the expert witnesses for the defense were treated as dishonest and culpable, for assuming that such a man was not sound and responsible.

It is difficult to understand on what basis the disease of inebriety is doubted, in the increasing army of cases in which spirits are used constantly, or to great excess at intervals, associated with marked changes of character and conduct. Any other interpretation of these groups of symptoms than that of brain failure and degeneration seems nonsense. The best authorities all agree, that the life and functions of the highest cerebral centres are always disordered by interruption in their natural nutrition. If the blood is impoverished, or poisoned by any deleterious substances, the effects are visible in all the brain functions. No one can use spirits continuously or in excess without breaking up the normal qualities of the blood and impoverishing the brain. No man can use spirits to excess and have a healthy, sound brain; and changed conduct and character are unmistakable symptoms of this. The facts in this field are within the observation of every physician, and are not theories but can be demonstrated beyond all doubt or question.

What is most needed is clinical study and medical observation of these cases above all moral theories, or present conceptions of what inebriety is or is not.

TREATMENT OF SCIATICA WITH PHOSPHORUS.

BY A. K. BELL, M. D.,
MADISON, GA.

One of the most unpleasant feelings an honest doctor can experience, is created when he sees his patients continue to suffer pain while he is unable to give them the desired relief. Such is often the case when one treats sciatica; but I have now treated three severe cases with such marked relief that I have no hesitancy in recommending to my fellow-practitioners the elixir of phosphorus, which has served me so well.

Case 1. A negro man about forty years old, who had always been quite well, began to suffer. The pain came on gradually, beginning in the gluteal region, and running down the posterior portion of the leg. In two or three weeks from the first symptoms he was so much crippled that he was compelled to go to bed. He had been treated about one month by two physicians before I saw him. In two weeks of treatment I gave him many things, including morphia and atropia combined and separate, with the result of only a few hours of relief. After the effects wore off he would suffer as intense pain as before. After about two weeks of such treatment I gave him elixir of phosphorus. In a few days after the beginning of this treatment he rested better at night from pain, and in one more week he was dismissed as cured. One year afterwards he had another attack which yielded at once to the treatment with phosphorus alone.

Case 2. A white woman, forty-two years old, suffered three months with severe pain from the gluteal region down the posterior portion of the leg. She was under treatment all the time, and all the remedies common to the cure of sciatica were used; but her only relief from pain was gained by using morphia. I was called to see her, and at once ordered the elixir of phosphorus, using nothing else. In one week the woman began to improve, and in another week she was dismissed. She is my next door neighbor, and I have not heard of her complaining since.

Case 3. A mulatto woman, about forty years old, began to suffer similar to the others one year ago. She was confined to the bed and had been under treatment for six weeks; had taken no anodyne, and had suffered intense pain all the time. When I first saw her, she could not turn herself in bed. I gave her morphia and atrophia combined, to relieve the pain. She was very anemic and emaciated. I ordered tartrate of iron and potash for one week, when she gained color and strength. Then I gave the phosphorus, and in two weeks she was up and walking about.

I cannot believe these are *post hoc*, but *propter hoc* cases. I hope others will try this preparation, and should they or should they not have the same good results as I, I would be glad to hear from them.

FOREIGN CORRESPONDENCE.

LETTER FROM BERLIN.

BERLIN, October 11, 1890.

The Royal Friedrich-Wilhelm University.—The Royal Military Medical Institute.—The City's Provisions for Accidents and Fires.—Influenza Statistics in the Prussian Army.—Treatment of Delirium Tremens.—Syphilis in the Horse.—A Boom for Emphysematous Patients.—A Button Lodged in the Nose Three and One-half Years.—Spermine.

The first question usually asked by an American visiting Germany to perfect his scientific education, is: "Where is the University?" Imagine his surprise when he finds, even in a world-renowned university-town like Gœttingen, that this question cannot be answered without great difficulty, if at all. The fact is that there usually exists no imposing array of connected structures forming the University, as is the case in America, but that the German Alma Mater is made up of a half a dozen or more "Institutes," scattered all over town, which in their entity represent the University. And frequently these institutes, especially those of recent date, such as the Hygienic and Bacteriological Institutes, are magnificent structures, while the central university building is often insignificant. This is signally the case in Berlin. The University Unter den Linden, *vis-à-vis* the palace of the late Kaiser Wilhelm, is an unworthy exponent of its fame and honor. It may be interesting to learn of some of its history. It was in the year 1807, the battle of Jena had just been lost and the Prussian kingdom was

practically extinguished by the terrific blows of the Corsican usurper. But the high-minded Prussian king, Frederick William III (the father of old Emperor William), far from believing in the permanent decline of the star of the Hohenzollerns, was first to regain heart, and publicly declared: "We have lost our material possessions, so we must try to strengthen and concentrate our spiritual ones; and, in this sense, I order the founding of the University of Berlin." Six years later the noble king had the satisfaction to reap the fruits of his seed. The yoke of the French tyrant was thrown off through the incessant stimulation of Prussia's youth by men like Roerner, Arndt, Jahn and Fichte, who taught at the new University. You know well what the University of Berlin represents in our day. Allow me to quote just a few names of the Medical Department: Graefe, Traube, Frerichs, Langenbeck, Schroeder are no more, but Virchow, Koch, Hoffmann, Helmholz, Dubois-Raymond, Liebreich, Leyden, Gerhardt, Henoch and Bergmann still grace the faculty, under whose auspices a most successful International Congress has just been held.

The great Central Institute where the medical student receives his entire clinical education, the Royal Charité, does by no means come up to the requisites of the day. The lecture rooms of Gerhardt and Henoch, which are frequently attended by 300 students, hold comfortably about one-third of that number, and late comers are happy enough to catch a word here and there, not to speak of seeing teacher or patient. The Institutes devoted to Physiology, Pharmacy, Chemistry, Anatomy and the Surgical and Gynecological Hospitals are magnificent new structures, while those of Hygiene, Pathology and particularly Chemistry are confined to miserable quarters. The height of shabbiness, however, is undoubtedly reached by the University Unter den Linden. You enter by the main gate and find yourselves immediately surrounded by impenetrable darkness. Long, but exceedingly narrow corridors lead from one wing to another. The walls are covered with bills, official and other ones, but the miserable light shed by the parsimonous lamps—old Sol has never matriculated at the Berlin University—forbids their perusal even to such students as should accidentally be free from myopia. The rooms are ridiculously small and primitive, the auditorium maximum on the second floor being the only room reminding you of the august character of the institution. The most ludicrous thing belonging to the University is its big clock. It hangs freely in the front hallway and between the two main entrances which oppose each other. But only those entering by one gate are blessed by reading off its time, the students who come in the other way see merely a circular piece of pasteboard. But old and rickety as the building is, which was originally a mansion occupied by Prince Ferdinand, of Prussia, it has many good things attached to it. In the first place its lovely location, Unter den Linden, where all that lends life and soul to Berlin—royalty, soldiers and the upper ten thousand—are ever visible. At one o'clock the ever-fascinating event known as "guard-mount" takes place. A company of a daily-changing regiment parades with the full band of the Regiment the Linden and relieves under various interesting military manœuvres, the company doing duty on the guard-house, just adjoining the University. The scene is never missed by the students and the big building becomes vacated when the roll of the drum and sound of the fife announce the soldiers' approach. A lovely garden surrounds the institution on either side, a part of which contains rare medicinal trees and plants, all clearly labelled for the use and instruction of the students. A "Reading Hall" is also located in the garden, and the Royal and University Libraries are in the immediate neighborhood. As an oddity I will mention that an old privilege of the University allows its janitor to keep and sell beer, which he does of course, but no case of intoxication has ever been reported.

In some future letter I shall speak in detail of the various Institutes of the University, and will now only mention a few points in regard to the Military Medical Institute.

The Government in Germany provides well for the sons of officers and military surgeons. The former are placed in the "House of Cadets" and are educated as officers, while the latter are placed in the Military Medical Academy, which provides the entire army with surgeons. All assistants of the Charité are taken from the Military Medical Academy, a fact which is causing a good deal of dissatisfaction among the rest of medical men. But as the Charité is a Royal Institution grumbling is of no avail.

As far as official or municipal help in accidents is concerned, there is no large city

on the globe worse provided for than Berlin. A Hospital Ambulance Service, such as is doing excellent work in America, is unknown here. A few accidents happening here of late have at last opened the eyes of the community. Several fires broke out at night, and as a result a number of persons perished who, if medical aid had been sooner obtainable, might have been saved. I will say a word too about the Berlin Fire Company. According to its own estimate the "Berliner Feuerwehr" is an unrivaled institution; but according to my judgment it is far inferior to the fire companies in New York, Philadelphia and all other large towns in America. You never know whether they are returning from a fire or hurrying to one, for they proceed with a never varying slowness. Besides, as became evident in the recent accidents mentioned, the single men are machines only and are not allowed to follow their own and often fortunate ideas. They are drilled as soldiers and consequently are poor mediums for saving human life. True, Germany consists of soldiers only, everything else is of secondary importance.

The statistics of the Military Medical authorities on the great epidemic of influenza, just published, present many points of interest chiefly from the etiological point of view.

The observations made in the German army pertain to 55,263 cases. In many instances the infection could be traced directly. For example, the garrison of Pasewalk, a town located near Berlin, had remained free from the affection until a captain of a Berlin regiment was ordered to do duty in Pasewalk. The captain was the first victim of influenza, next in order came the military surgeon who treated him, then a sergeant whom the captain had ordered to report, next came wife and children of the surgeon, and a friend of the captain. In a few days the entire town had the influenza. In 254 cases persisting neuralgia, and in 290 cases inflammation of the middle ear was found. Sixty cases terminated fatally.

At the recent meeting of German Naturalists and Physicians, held at Bremen, Dr. Aufrecht, the well-known clinician of the Magdeburg City Hospital, discussed the treatment of delirium tremens. Two main questions, he said, come up for consideration, viz.: Have we a sovereign remedy for delirium tremens? and, does the patient need alcohol during the treatment? Aufrecht declared that he had never obtained beneficial results from the use of opium and morphine, and that he relied exclusively on hydrate of chloral. He usually prescribes in the evening a drachm of the drug to be taken in half an ounce of simple syrup and syrup of orange peel each. Later on the dose can be increased. In all uncomplicated cases, alcohol cannot be dispensed with. He gives usually daily half a pint of Hungarian wine or the following potion:

℞ Alcoholis (90 per cent.) . . . . . f℥ii
Syr. simpl. . . . . f℥ii
Tr. aromaticæ
Tr. amaræ . . . . . āā gtt xv
Ag. amygd. amaræ . . . . . f℥ss
Aq. destillat. . . . . f℥viii
M. S. Tablespoonful every 3 hours.

Aufrecht has treated in all 294 simple cases. Ten patients died (four of these received half a drachm of alcohol and one-third grain morphine every night. Of 124 cases treated with hydrate of chloral not a single one was lost. Dr. Noele, of Osnabrueck, on the other hand, was opposed to the exhibition of hydrate of chloral or alcohol, and emphasized the gratifying results he had obtained from warm baths extending over fifteen minutes and followed by the cold douche.

Recent experiments made by Dr. Lesin to ascertain whether syphilis can be communicated to a horse, have been clearly successful. The horse bore the injections and inoculations with syphilitic substance exceedingly well, and on dissection showed numerous proofs of syphilitic infection, such as swelling of the lymphatic glands and plaques near the semilunar valves of the aorta and in the pulmonary artery.

Dr. Steinhoff, of Berlin, has just completed an apparatus which appears of great value to emphysematous patients. The exceedingly costly Pneumatic Cabinet, though valuable in the treatment of the catarrhal symptoms of emphysematous patients, has nevertheless proved useless in the treatment of the disease itself. Prof. Gerhardt, of the Berlin University, has first called attention to the high value of manual pressure upon the thorax on expiration. Unfortunately no one, neither patient nor nurse, can keep up such pressure for longer than fifteen minutes. An emphysematous mechanic by the name of Zoberlin perfected some time ago —under guidance of Prof. Rossbach— a chair which assists the patient in compressing his own thorax. But as emphysematous

patients are easily tired and abhor continuous exercise, Zoberlin's ingenious apparatus could not universally be utilized. The invention of Dr. Steinhoff is a "respiratory belt" filled with compressed air, which is made to compress the thorax on expiration. A desk-like piece of furniture contains the various accumulators, a small dynamo or gas motor doing the work. In seven cases the belt brought relief.

Berlin surgeons extracted recently from the nose of a girl, seven years of age, a button which had lodged in that part for 3½ years. The chief symptoms produced by the foreign body were chronic coryza, snoring breathing, dyspnœa and nasal speech, all of which receded promptly after extraction of the button.

As the testicle emulsion used by Prof. Brown-Séquard does not exclude the possibility of septic infection, various observers have recently aimed at isolating the active principle of the alleged invigorating substance contained in that organ. Prof. Roehl appears first to have been successful in this attempt. He has prepared the substance from the testicles and prostatic gland of young, healthy oxen and stallions. Spermine—that is the name of the active principle in question—is precipitated by chloride of gold, and on treatment with metallic magnesium gives off the odor of fresh human sperma. Dr. Roschtschinin, private physician to the Russian Emperor, extols the invigorating and almost marvellous power of the remedy in asthma, paralysis of the extremities, diabetes, delirium tremens and tuberculosis. He uses spermine in a one or two per cent. sterilized solution, of which he administers one syringeful subcutaneously. The solution is kept in glass tubes, and the syringe is to be cleaned before use with concentrated carbolic acid. Spermine contains about eighteen per cent. of peptone.

PERISCOPE.

Simple Method for Controlling Epistaxis.

Dr. W. W. Parker, of Richmond, Va., says, in the New York *Medical Record*, October 4, 1890: The plan of arresting hemorrhage from the nose, which I here describe, I have used for thirty years without one failure. When I first began to practice I used Bellocq's instrument, but I found it painful, and, in small children, exceedingly troublesome of application. Two months ago a man twenty-three years old, in this city, was operated upon for irregular septum (a small part of the bone was removed), which was followed by troublesome hemorrhage. The operation was by a very skilful specialist, who, upon application of the patient the day after the operation, plugged the posterior nares with difficulty. But the hemorrhage persisted for three days, when the patient, whose father's family I had attended for many years, applied to me in company with his father. I, of course, declined to have anything to do with the case, and urged him to return at once to the specialist who could do everything that was necessary. This he postively refused to do, and said if I would not attend him he would get some one else. He had visited the doctor three times, but the bleeding continued. As it was ten o'clock at night when he came to my office, I told him I would stop the bleeding and would see his doctor next morning and get him to call at the patient's house. This I did. I stopped the bleeding at once, but kept the patient and his father in my office till twelve o'clock at night to see if the hemorrhage really was arrested. This was the last of the bleeding. This man was of a hemorrhagic diathesis, and some three weeks after this, he had hemorrhages from the lungs, which has continued occasionally up to this date. At the Red Sulphur Springs of Virginia he gained twenty pounds but the bleeding from the lungs continued. He is of a phthisical family. I have been thus particular so that I might satisfy the reader that this was a bad case of epistaxis.

My plan is not only effectual, but is easy of application and absolutely painless, and can be probed in the smallest patients. The little device which I use is made of fifteen of the long threads of patent lint, size three and one-half or four inches long, which I double on themselves and tie in the middle, and let one end of the string be six or eight inches long so as to pull the plug out when necessary. When doubled on itself it looks like a "comet" in miniature with a nucleus and thirty tails (or twice the number of threads used). A probe, or soft piece of pine but little bigger than a match, is pressed up against the centre, and it is passed back upon the floor of the nasal cavity and pushed on till you reach the posterior nares. This will be known both by the resistance and the length of the probe, or the depth which

you have reached. Then slowly withdraw the probe and plug the anterior nares and you have arrested the bleeding. These twenty or thirty ends floating in the blood at once coagulate it. The passage of the soft lint gives no pain whatever. In persuading children to submit to the operation, I often pass the lint up my own nose to satisfy them it gives no pain. If lint is not at hand I use the largest size spool cotton.

Some years ago I called the attention of one of our local societies to this matter, and it was mentioned in a local journal, but attracted no attention. Seeing the notice of Dr. Fridenberg's method in the *Medical Record*, I send this to you hoping it will have a wider circulation. Any sensible layman can perform this operation. Many years ago I was wont sometimes to remain at the patient's house for hours, fearing a return of the bleeding, but do so no longer. The plug is removed in from twenty-four to forty-eight hours. It gives no pain and the patient is willing for it to remain. The other methods are all painful in execution, and the discomfort, while the plug remains, is very considerable.

Chlorodyne Poisoning.

The *Lancet*, September 27, 1890, contains the following account of a case of poisoning by chlorodyne, under the care of Dr. Dickinson, in the Liverpool Northern Hospital, in which it was estimated that there were sixteen grains of morphia in the quantity taken. A stout, flabby man, fifty years old, was admitted to the Liverpool Northern Hospital at 4 P. M. Two hours previously, when under the influence of alcohol, he had taken the contents of a four-ounce bottle of chlorodyne, equal to sixteen grains of morphia. On admission he was livid and comatose, respiration short, stertorous, and at long intervals, pulse slow and full, and pupils contracted. Zinc zulphate and apomorphia had been given without effect. A stiff tube was at once passed, and the stomach well washed out by the syphon. Some hot coffee was then introduced by the same channel. A powerful Faradaic current was then applied and soon had the effect of partially rousing him and improving respiration and color; but as soon as this was discontinued lividity returned. Mustard plasters were applied to the chest and soles of the feet. After a time the battery appeared to lose its effect, but smacking the chest was of good service. As he did not improve the cold douche was applied to his face, with instantaneous effect, and he was soon able to be propped up with his feet over the edge of the bed. As the douche was found inconvenient of application in this position, a Higginson's syringe was used and cold water squirted at intervals on to his mouth and nostrils. This seemed to annoy him much. He was persuaded to stand up and to try to walk, but after a dozen steps would relapse into unconsciousness and lividity. The same result would follow any intermission of stimulation for more than a few seconds. Several hypodermic injections of atrophine, ether and strychnia were given between 4 and 8 P. M.; also sal volatile by the mouth. At about 8 P. M. he became more sensible, and could give an account of his mishap. From this time, although constantly dropping off to sleep, he could easily be aroused. He was kept awake, walking a little at intervals, till 6 A. M., when he was allowed to go to bed. At 11 A. M. he walked out of the hospital perfectly well.

Commenting on this case, Mr. Mothersole said he would like to make a few remarks as to the treatment of this and similar cases. Apart from the administration of physiological antidotes, its *rationale* is to maintain respiration and circulation until the effects of the poison pass off. This is best attained by means calculated to restore consciousness; in the case described it was remarkable how the patient's respiration and color improved whenever he showed any sign of sensibility. The prospect of saving life depends mainly upon the stock of irritability at our command and the means we possess of exciting it. It is desirable to have a variety of stimuli, so as to alternate them, in order that their effects may be less likely to wear off. They should not be applied more vigorously than necessary, lest irritability be exhausted. At the same time internal stimulants are valuable in maintaining and increasing irritability. A most potent stimulus, and one always ready at hand, is the cold douche. The method of its application is worth attention. A large volume of water is by no means necessary. The force and suddenness of the jet and the locality to which it is applied are of far more importance. For efficiency and convenience a Higginson's syringe is an excellent weapon. And the most responsive places are the mouth and nostrils. It is almost

universally recommended that these cases should be treated by walking them about. He said he might be pardoned for holding rather strong opinions on the subject since seeing the disgusting spectacle of a patient, whose legs were utterly unable to support him, dragged about between two stalwart men. What is the object of this treatment? It depends, no doubt, on the fact that so long as the patient is able to walk about he is in no danger of dying, for he must be more or less conscious. But does this movement give much assistance in maintaining consciousness? How often does the patient, as in the case described, relapse into insensibility while being "walked about," even when the contact of his feet with the ground derives an additional potency from the presence of mustard plasters on his soles? In cases of real danger the act of walking affords little if any stimulus, and it must be terribly exhausting when kept up for any length of time. In this way it may help to account for some cases of relapse and death. It is far better to keep the patient sitting in a chair, consciousness being maintained by repeated irritation. In the worst cases the endeavor should be made to keep the patient alive by artificial respiration.

Suturing Extensor Tendons of the Finger.

Dr. W. M. Alrich, in the *University Medical Magazine*, October, 1890, describes the case of a man 21 years old, who came to the University of Pennsylvania Hospital on June 5, 1890, with three ragged lacerated wounds on the dorsum of the right hand, caused by being caught in a planing machine. He was bleeding very profusely, having cut most of the superficial veins. It was at once noticeable that the index finger remained flexed while the others were extended. Examination showed that the tendons of the extensor communis digitorum and extensor indicis muscles were completely severed. After the bleeding vessels were secured and the parts cleaned, the distal ends of the tendons were seen at the bottom of one of the wounds while the proximal tendons were not visible. A grooved director was inserted in the tendinous canal and a counter opening made a short distance anterior to the annular ligament. At the bottom of the incision were found the proximal ends. These were secured by a pair of forceps. Another pair was then inserted in the original wound and along the canal where the grooved director had been carried, the divided tendons were drawn down, and their continuity was restored by means of catgut sutures. The tension was quite marked, since retraction had separated the divided ends about two and one-half inches. The external wounds were approximated by means of silkworm-gut, dressed antiseptically, and motion was prevented by means of a splint.

The stitches in the external wounds were removed in about five days. The patient made an excellent recovery and had perfect control of his index finger, its movements being absolutely normal.

Spermatozoa in the Urine of Women.

The Paris correspondent of the *Pharmaceutical Era*, October 1, 1890, says that a delicate point of ethics was recently raised at Bordeaux. A pharmacist of the place, having been requested to analyze a woman's urine, found it on microscopical examination to contain quite a number of spermatozoa. Feeling doubtful as to whether he should mention the fact in his report, he asked Professor P. Carles, of the Bordeaux School of Pharmacy, for his opinion on the subject. The professor replied that, not long since, he found himself in just the same predicament. A gentleman of some standing in society, who was in the habit of having his urine occasionally examined, one day sent a specimen of his wife's water, with a request that it be analyzed. The microscope having shown the presence of spermatozoa in an otherwise normal urine, Mr. Carles asked himself whether the husband, aware of the microscope's power, was not trying to verify some dark suspicions. Although such hardly seemed to be the case, the professor concluded to keep silent on his discovery. And since then whenever females' urines are presented, either described as such, or identified from special histological constituents, he has made it a rule to omit in his report all mention of any spermatozoa that may have been found. Their presence is only noted, confidentially, when the report is to be handed personally to the physician. Of course in a legal case the same course would have to be followed. The writer of the letter adds that it may be of some interest here to remark that some

years since a like instance occurred in Brooklyn, N. Y. Two well-known physicians attending the young unmarried daughter of one of the "first families" there, were one day taken aback by the discovery of swarms of the tell-tale microzoa where they had no business to be. After consultation, spermatozoa not being a morbid symptom in female urine, they wisely came to the same conclusion as the French professor, and kept their find to themselves.

Influence of Ventilation on Micro-organisms Suspended in the Air.

In a communication to the *Zeitschrift für Hygiene*, Band vii, Heft 1, 1889, R. Stern says that from ventilation we expect to get rid, not only of the gas-forming products of tissue change and of decomposition, but also —and what from hygienic considerations is still more important—of any possible bearers of infection which may be suspended in the air. His experiments show that ordinary ventilation does not fulfil these requirements. In a large room of 85 cubic meters he scattered dust containing artificially-developed bacteria. The rapidity with which the dust spontaneously settled, and the influence of different degrees of ventilation, was then tested. The quantity of germs floating in the air was ascertained each time before and after the experiment, by means of the method of Petri. When the air is quiet the germs sink quickly to the ground. On examining the fine dust collected from school-rooms, six feet above the ground, on desks, etc., the air in one and one-half hours was already found nearly free from germs. The most customary degree of ventilation, which corresponds with a renewal of the air once, twice or thrice in the hour, purifies the air of germs no more, or very little more, quickly than simply allowing them to settle. An increase of the degree of ventilation, which is scarcely feasible without causing direct draught, increases gradually the influence of ventilation upon the germs floating in the air. The limit at which a more powerful and more rapid action begins, should correspond to a renewal of the air six or seven times an hour. A rapid and complete clearing of the germs from a dwelling-room is accomplished only by a powerful draught. A considerable separation of germs from floors, paper, furniture, clothing, etc., cannot be accomplished even by strong airing of the room. Finally, the development of vapor does not quickly and completely precipitate germs suspended in the air, though it hastens their deposition in a slight measure.—*Münchener med. Wochenschrift*, Sept. 16, 1890.

Thiol.

Prof. Schwimmer, in the *Wiener medicinische Wochenschrift*, No. 30, 1890 (*Deutsche medizinal-Zeitung*, Sept. 22, 1890), states that in an endeavor to produce an artificial ichthyol, free from the unpleasant qualities of the natural article, Dr. Jacobson discovered thiol, a carbon compound, containing twelve per cent. of sulphur, readily soluble and absorbable, having reducing properties and possessing a not-disagreeable odor. The usefulness of both ichthyol and thiol is largely dependent upon this sulphur, the intimate association of which with carbon removes the irritating quality of free sulphur. Schwimmer has used thiol in a large number of cases of cutaneous disease and arrives at the conclusion that the remedy is indicated in affections in which desiccation and contraction are sought. The following are useful formulæ:

℞ Thioli liquidi . . . . . 30 to 50 parts
Aquæ destillatæ. . . . . 100 "
M. S. For topical application.

℞ Thioli liquidi
Glycerini . . . . . āā 50 parts
Aquæ destillatæ . . . . . 100 "
M. S. For topical application.

℞ Thioli liquidi . . . . . 10 parts
Unguenti simplicis . . . . . 50 "
M. Ft. Unguentum.
S. For topical application

℞ Thioli sicci pulveris q. s.
S. Dusting powder.

Buzzi prescribes gr. ss. to gr. xv of dry thiol, in tablet or pill, or gtt. iij to gtt. xx of liquid thiol, in water, three times daily.

Chicago Pasteur Institute.

Dr. A. Lagorio writes to the *Medical Standard*, October, 1890, that since the inauguration of the Pasteur Institute in Chicago, on July 2 there have been treated to date [date not stated. Ed. Reporter] twenty-four persons; thirteen having been

admitted in July and eleven in August. Sixteen were males and eight females. The youngest patient was four years old and the oldest fifty-five years. Sixteen came from Illinois, two from Indiana, one from Ohio, three from Iowa, one from South Dakota, one from Arizona. One patient was bitten by a skunk, two patients by a cat, and twenty-one by dogs. Eight patients were bitten on the hands, two on the face and fourteen on the body and limbs. Twelve patients were bitten by animals recognized to have been mad by the symptoms shown during life, and twelve patients by animals suspected of having been mad. Eight patients had their wounds cauterized with lunar caustic, three with carbolic acid, one with potassic hydrate, one with ammonia, and eleven were not cauterized. To nine patients was given the simple treatment of ten days' duration, with one inoculation daily. To fifteen patients the modified intensive treatment of fifteen days' duration, with two inoculations daily, rest on the sixth and twelfth day.

Once the brain of a suspected animal was brought to the Institute and two rabbits were inoculated with it, but the result being negative the patient was not treated. Over sixty persons were declined treatment as reasonable evidence was not produced to show that the animals were mad or even suspected to be so. Every patient tolerated the inoculation perfectly well.

The time which elapsed between the date of the bite and commencement of treatment was as follows:

1 day in 3 patients.	9 days in 2 patients.
2 days in 3 patients.	12 days in 1 patient.
3 days in 3 patients.	3 weeks in 1 patients.
4 days in 4 patients.	1 month in 2 patients.
5 days in 1 patient.	1 year 2 months and 14 days in 1 patient.
6 days in 2 patients.	
7 days in 1 patient.	

Not a single accident has occurred in any patient during treatment, and all left the Institute in perfect good health..

Training Schools for Nurses in New York.

From "The Training of a Nurse," by Mrs. Frederick Rhinelander Jones, in an article in *Scribner's Magazine*, November, 1890, says that the Bellevue Training School for Nurses was started on May 1, 1873, with a superintendent and five nurses, having five wards under their care.

In 1890 the school has 62 pupils and has graduated 345, while as a direct outgrowth of that modest beginning there are three other great schools in New York alone. These are the New York City, which has 64 pupils and has graduated 263; the New York Hospital, with 48 pupils and 192 graduates; and Mount Sinai, with 50 pupils and 111 graduates. There are also smaller schools in the city, but, great or small, Bellevue must always be honored as the pioneer. Her graduates are at the head of most of the important schools and hospitals in the country, and have even gone so far afield as England, Italy, and China.

The next school to be established was the New York City, which was started by the Commissioners of Charities and Correction in 1877, and is entirely supported by the City. Until last year it was known as the Charity Hospital School, because it began there, but as it grew its work spread until the old name was misleading and had to be changed. It is now the largest and in some respects the most important of all the schools, as it nurses five different hospitals—Charity and Maternity on Blackwell's Island, the Infants' Hospital on Randall's Island, Gouverneur at Gouverneur Slip, and Harlem, at the foot of East 120th Street, the last two being accident or emergency hospitals, while at Charity the cases are largely chronic. Besides the pupils of the school there are thirty-two permanent trained nurses at Charity and Randall's Island, making nearly a hundred in all, for whom the superintendent is directly responsible, and over whom she has full authority. The other schools in the city are supported from the funds of the hospitals which they nurse.

Coffee as a Disinfectant.

The *Deutsche Medizinal-Zeitung* for September 22, 1890, quotes the following from the *Journal de Médecine d'Algérie*. On an extremely hot day in Algiers, Dr. Barbier and some officers were directed to a village inn, to make an examination of the body of a murdered man. They were led to a small apartment in which the body lay, but were met by so intolerable an atmosphere that they at once retreated. Upon request a plate of ground coffee was brought and sprinkled upon the cadaver, the floor and the walls. The horrible stench disap-

peared and the examination was proceeded with without interruption. Gratified with the result, Barbier soon found occasion to make a similar use of coffee, with equal success, in the case of a body which had lain in the water for a week. He now began to use coffee in this way in the treatment of foul ulcers, and with good results. He considers coffee an antagonist of the narcotic effects of tobacco, for which there is no better antidote. He also recommends the use of coffee for the disagreeable odor sometimes acquired by ice-chests for the preservation of animal foods. To preserve game, this shouid be first cleaned and then strewn with coffee. It was also observed that cholera bacilli and other microbes lose the faculty of multiplication in infusions of coffee.

Hypnotism in Belgium.

The *Deutsche Medizinal-Zeitung*, Sept. 22, 1890, makes the *Bull. Med.* No. 60, 1890, authority for the statement that the Belgian Chamber of Deputies has recently adopted the following law:

1. Any one exhibiting a hypnotized person will be punished with imprisonment for from fourteen days to three months, and a fine of from twenty-six to one thousand francs.

2. Any one not medically qualified who shall hypnotize a person under eighteen years of age or a person not of sound mind, shall be punished with imprisonment for from fourteen days to one year and a fine of from twenty-six to one thousand francs, even though the hypnotized person be not used for exhibition.

3. Any one who, with fraudulent intention or with intent to injure, shall permit a hypnotized person to write or sign a document containing an agreement, making a disposition of property, entering into a contract, granting a release or containing any declaration, shall be punished with imprisonment. The same punishment applies to any individual who shall make use of any such document.

Massage in Headache.

Dr. Norström, finding that a good many cases of headache occur where, though the symptoms are more or less like those of migraine, the remedies suited to that affection are of but little use, examined the heads of such patients carefully, and came to the conclusion that the pain must depend upon inflammatory thickenings existing at the insertion of various muscles, especially the sterno-mastoid, the temporal, the scaleni, the trapezius, and the occipito-frontalis. These indurations do not usually produce any local pain, and therefore are generally unnoticed both by physician and patient. They are commonly the result of "taking cold," and the headaches they cause can be traced to changes in the weather. Dr. Norström obtained excellent results by regular massage of these indurated spots, the sittings lasting for about a quarter of an hour. Similar treatment is also efficacious where the headache is due, as it sometimes is, to enlarged lymphatic glands. Of course, little result can be expected from massage in headaches of anæmic or of hysterical origin, or where there is organic cerebral disease.—*Lancet*, Sept. 27, 1890.

A New Form of Nasal Tampon.

The *Deutsche Medizinal-Zeitung*, Sept. 25, 1890, describes a new form of nasal tampon devised by Ignazio Dionisio, as published in the *Monatsschrift für Aerztliche Polytechnik*. By means of this instrument the nasal cavity can be tamponed, in case of hemorrhage, without interfering with nasal respiration. The principle is that of the Trendelenberg canula for the trachea. A tube similar to a catheter, surrounded by an elastic rubber bag, is introduced into the nasal cavity, and the bag is distended with air or water. The bag adapts itself to the cavity, while the respiratory current of air passes through the tube. By this method septic decomposition of blood absorbed by the tampon is impossible.

Apomorphia for Croup.

The emetic properties of apomorphia may prove of great service in a variety of conditions, one of which is croup. One-eighth of a grain may be dissolved in six teaspoonfuls of water, and of this a teaspoonful may be given to a child every five or ten minutes until emesis results. The second or third dose usually does the work. One great advantage of apomorphia is that it may be given hypodermically to persons—old or young—who cannot, or will not, swallow.

THE

MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

CHARLES W. DULLES, M.D.,
EDITOR AND PUBLISHER.

N. E. Cor. 13th and Walnut Streets,
P. O. Box 843. Philadelphia, Pa.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

KOCH'S METHOD FOR CONSUMPTION.

Since our Editorial of November 15 was published, the formal announcement by Professor Koch of his method of treating consumption has been cabled to this country and published in the newspapers. A careful examination of this announcement does not lead to any modification of the opinions already expressed in the REPORTER. It is probably safe to assume that Koch's method accomplishes something very remarkable in the treatment of lupus, as the cases alluded to in his paper are of a very striking sort, and—besides the credence which his accomplishments thus far have entitled him to—his operations have been witnessed by men of well known ability and integrity. When it comes to consumption, however, we think the announcement is of a most unsatisfactory character. When sifted, Koch's sole claim seems to be that by his method of treatment the condition of patients with incipient phthisis may be improved—how much, or how soon, his communication does not say; while for cases of advanced phthisis, with marked cavities, he makes no distinct promises. Rightly understood, this seems to be about what we had already accomplished in the management of this disease. Humanity prompts the hope that Koch's method may accomplish all that the most enthusiastic have claimed for it; but scientific men must carefully distinguish between what is legitimate as hope, and what is to be accepted as a demonstration.

The rush of patients and physicians from various parts of the world to Berlin, which followed Koch's announcement, must be deplored; because, taking this as Koch and his immediate followers present it, there is nothing to be got at Berlin except his curious remedy—his nostrum. The mode of administering it Koch seems to have disclosed, and in this there is nothing which the humblest practitioner in medicine cannot imitate, when once the proper remedy is put within his hands.

We must repeat our condemnation, already expressed, and still strongly felt, against the way in which Koch keeps to himself the nature of a remedy which is expected to be of so great service to mankind. The claim that this is done in the cause of science may be honestly put forth, but it can by no means be accepted. The right course, the course in accordance with the principles contained in the Hippocratic oath, and the principles which have been the glory of the medical profession, ever since it had the slightest claim to be a profession—would lead, we think, any purely humane, unselfish man at least to tell the world how he prepared a remedy, for which such great virtues are claimed, and of which mankind stands in such sore and pressing need. If his method were perfect, no time could be too soon for such a gift to his fellow-men; and if it were imperfect, we

think a sincere and a thoroughly good man would then tell what progress he had made, in the hope that perhaps some more fortunate, or possibly more ingenious investigator might reach the goal before he did, and so much the sooner give to the numberless sufferers with consumption the rescue, while waiting for which they might otherwise die.

NOT A FAST BUT A FRAUD.

In this issue of the REPORTER, we publish a letter signed by Dr. W. F. Hertzog and Dr. W. D. DeLong, containing a very interesting and conclusive report of their examination of Mrs. Wuchter, the alleged faster, near Allentown, Pa., to whose case reference has been made in the REPORTER a number of times. This report and the most recent developments of her case furnish very satisfactory evidence of the correctness of the opinion expressed in the REPORTER when the case was first commented on, September 27, 1890. About that time, the family physician of this woman and her husband and the *New York Herald* made an attempt to work upon the sympathy of the public by decrying the criticisms of the REPORTER, and especially the caption of our Editorial.

In closing the subject, however, we think it proper to say that the whole history of the case furnishes abundant confirmation of the opinion expressed by the REPORTER September 27, 1890, and justification for entitling the Editorial in regard to it, "Not a Fast but a Fraud."

A LEPER COLONY.

We note with interest that Dr. William H. Ford, President of the Board of Health of Philadelphia, has addressed to Dr. J. B. Hamilton, Surgeon-General of the United States Marine Hospital Service, a letter, in which he proposes, at the suggestion of Dr. Duhring, of this city, that the Government shall provide a leper colony to which persons having leprosy, who may be detected in the United States, may be sent, with a view to their isolation under less trying circumstances than accompany isolation as practiced now in the different localities in which they are found. He proposes that the Government shall provide places where persons suffering from leprosy can be separated from the public and humanely cared for and treated in such a manner as not to deprive them entirely of the comforts and enjoyments of life. The protection of the public and the humane management of the unfortunate subjects of this disease are the two-fold objects that would be accomplished by this course.

He adds that it is the consensus of opinion that persons suffering from leprosy, on account of its peculiar nature, its chronic character, and the abhorrence with which the public view it, should be removed from the midst of society and humanely cared for and treated in places specially set apart for this object. It is impracticable for towns or cities or even States to provide such places on account of the expense: the number of cases not being large enough to warrant the necessary expenditure. He asks what is finally to be done with the lepers now ill provided for, and those that shall be discovered in the future? They cannot be treated in general hospitals, except for a very limited time. It is difficult to return them to their native countries, though most of them are unnaturalized foreigners. Where there are hospitals for the treatment of contagious diseases (and few places have such special institutions) temporary provision might be made for them. Here they must necessarily be secluded in unfrequented apartments, denied intercourse with relatives and friends, shut out from the world, denied the freedom of outdoor exercise because of the popular aversion to the disease, and doomed to a life of suffering and, what is worse, mental anguish on account of their deserted and hopeless state. What is to become of lepers who may happen to be discovered in places which have not even such inadequate means

for their care? Dr. Ford says there are probably to-day lepers in every large city in the country which necessitates providing many places for their treatment. Barring the expense, it is not wise to multiply these settlements. Nevertheless the public must be protected, even though it be at the expense of the liberty and happiness of those unfortunate subjects whose condition could be greatly ameliorated by their segregation in one or more well appointed stations in convenient parts of the country.

Dr. Ford's suggestion deserves careful consideration, and we believe might well be adopted, although the readers of the REPORTER know it is our opinion that leprosy is not contagious in the ordinary sense of the term, and that lepers ought not to be treated as if it were; nevertheless, we believe that in the present state of science and the present condition of public opinion, it would be very advantageous if the Government would appoint and maintain a place where lepers could be sent and treated, for their own good and for the comfort of the community—if not for its protection. We commend this matter to the thoughtful consideration of the readers of the REPORTER. Surgeon-General Hamilton has already indicated his approval of the idea in general, while pointing out the fact that the United States Government cannot force citizens affected with leprosy to leave their homes. This we quite understand; but would be glad if the Government could provide a place for voluntary segregation of citizens and compulsory segregation of aliens, so that the practicability and desirability of the method might be tested.

TREATMENT OF ECZEMA IN CHILDREN.

The treatment of eczema is not so definitely settled as to be one for all cases. Every case has its own peculiarities and demands special attention. Remedies which may be valuable in one may be found worthless in another. The treatment of the disease, when occurring during childhood, must be different from that employed in adults. Realizing this, Dr. E. Saalfeld, in the *Deutsche Medicinische Wochenschrift*, July 3, 1890, has endeavored to place the treatment of eczema in children upon a rational basis.

The disease in children owes its origin, in many cases, to excoriation, or chafings, between the nates, in the bend of the knee, and in the folds of the neck. This is most frequently met with in fleshy children. In eczematous intertrigo, when the usual household remedies, such as salves and powders, have failed to give relief, a careful regulation of the diet and a change of food is primarily indicated. Very frequently diarrhœa will be an accompanying symptom, and this should be checked at once. If the skin is highly inflamed, a cool application of equal parts of a five per cent. solution of boric acid and lead water, and the use of a five per cent. boric acid ointment will be found most beneficial. If the sk moist, it should be dried with powder, before the ointment is applied. In cases of eczema of the head and face the diet should be very plain and contain as little fat as possible. The bowels should be kept open by means of suitable laxatives. The flakes and scales should be moistened with olive-oil and removed. The underlying skin may then be treated with an ointment composed of boric acid, one and one-half parts; oxide of zinc and starch, of each five parts; vaseline, thirty parts.

In general eczema, especially of a scrofulous origin, the constitutional treatment plays a most important part, and should include a careful regulation of the diet, the administration of cod-liver oil in connection with phosphorus, and arsenic internally. The local treatment in these cases should consist merely in the application of vaseline and subsequent powdering.

Naturally, before any treatment for general eczema is instituted, a careful examina-

tion of the skin should be made, in order to exclude the possibility of the disease having been caused by the presence of parasites.

In conclusion, Saalfeld warns against the use of tar, since it is very irritating to the skin of children. Its place may, however, be ably filled by an ointment composed of white precipitate of mercury, one part; balsam of Peru, five parts; and benzoinated oxide of zinc ointment, thirty parts.

Naturally, the hygienic surroundings of the patients is very important; well-ventilated rooms, fresh air and scrupulous cleanliness, all contribute largely to a rapid recovery.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY, for the year 1890. Vol. xiv. 8vo, pp. 479. Detroit: O. S. Gulley, Bornman & Co., 1890.

This volume includes the transactions of the Society at its twenty-fifth annual meeting, at Grand Rapids, June 19 and 20, 1890. It is impossible to review it satisfactorily, because it contains no less that thirty-five papers and addresses, besides the discussions and a number of reports, etc. The subjects cover a wide range, and are all of quite unusual excellence. It is evident that the medical profession of Michigan is thoroughly modern in its medical ideas, and that it comes to the annual meetings prepared for a vast amount of admirable work.

The volume is well printed, and firmly but simply bound. It is in every way a credit to the Society, and to the Editor, Dr. Charles W. Hitchcock, of Detroit.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY, Vol. xi, quarto, pp. 1,102. Washington: Government Printing Office, 1890.

As each new volume of the Index Catalogue appears, we have anew the pleasure of praising the industry and skill of its Editor, and the wise liberality of the Government, which puts so valuable a work within the reach of all investigators in medicine. The eleventh volume, which has just come to hand, contains the words Phædronus—Régent. We notice the subject of phthisis covers seventy-nine pages, which shows the enormous literature it has devoted to it.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION, Thirteenth Annual Meeting, Boston, Mass., September 17, 18, and 19, 1889. 8vo, pp. 80. New York, 1889.

This volume, according to the table of contents, contains a number of papers read before the Society at its meeting in 1889. But in looking through it we are surprised to find that, with perhaps one or two exceptions, only the titles of the papers are given. The discussions on them, however, are in most cases so full that one gets a very good idea of what the author must have said. It is a pity, nevertheless, that both papers and discussions could not have appeared together. We hope this may be the case with succeeding volumes. The original articles are too valuable to be lost.

ESSENTIALS OF ANATOMY AND MANUAL OF PRACTICAL DISSECTION, TOGETHER WITH THE ANATOMY OF THE VISCERA. Prepared especially for Students of Medicine. By Charles B. Nancrede, M. D., Professor of Surgery in the University of Michigan, Ann Arbor, etc. Third Edition, revised and enlarged. 8vo, pp. x, 388. Philadelphia: W. B. Saunders, 1890. Price, $2.00.

The present edition differs from its predecessors in containing a series of thirty colored plates, taken from the works of Maclise, Savage, Quain, and Hirschfeld. They have been chosen with good judgment, for the purpose of making the book useful to the student in the dissecting-room. The rest of the book abounds in good wood-cuts, there being one hundred and eighty in all, which amply illustrate the text. There is also a good index. In fact, it is much more of a book than most of the others intended for the same class of readers, and is most excellent in plan, style and contents.

Correspondence.

The Alleged Faster.

To the Editor.

Sir: On October 20, we visited Mrs. Adam Wuchter, of White Hall, Lehigh Co., Pa., whose case has been so fully discussed in the Reporter, and who was said by her friends to be suffering from a malignant affection of the œsophagus which made her unable to swallow, and to have lived in this condition, without food or drink, for about seven months. We could not get a history of her ancestry; but she was an only child. These are often "spoiled," and likely to become nervous. Prior to her present illness, she had spells of sickness that lasted for months; and then she would get well enough to do her house-work again. In the present illness she lost her voice suddenly, and has been in bed for nineteen months.

On looking at her, we saw a woman somewhat emaciated, her eyes covered with a cloth, on removing which we found the eyeballs turned up. Taking hold of her right arm we found it apparently paralyzed. In trying to percuss her chest and abdomen, there seemed to be diminished sensibility of the skin of those parts; but her limbs could be freely handled without giving her

pain. The radial pulse could not be detected on account of the muscular tremors which she constantly had when any one attempted to feel it; but there was a good heart action. She had no œdema and no bed-sores, such as might be expected from long lying in bed and starvation. She talked aloud and glibly enough to show that her mouth was not dry. She told us to give her water to drink, so that we might satisfy ourselves that she could not swallow. But when we brought the cup near her lips she had a regular attack of hysterical convulsions. Before we went off she treated us to a spell of hysterical dyspnœa. Her husband said she had urinated only once since Good Friday! (It will be remembered that Ultzmann, who had such a large experience in the treatment of disorders of the genito-urinary organs, saw cases of anuria in hysterical women which lasted from one to two days. Benedikt reports a similar case of eight days' duration, but nobody ever claimed such an absurd period as does this woman's husband.)

Our diagnosis of the case was hysteria; for the manifestations of hysteria were so prominent as not to be mistaken. If there were an organic trouble in her case, the hysterical manifestations would have been less prominent by this time. Before we had a right to reject the diagnosis of cancer of the œsophagus which had been made public, we had to exclude that. In regard to this point the woman did not, in our opinion, have the cancerous cachexia; no tumor of any kind was visible on the outside of her neck, and no instrument was ever passed down her œsophagus to see whether any *real* obstruction of any nature existed. If she had acquired aphonia from an organic disease, it would not have appeared suddenly. Last, but not least, she would have died before this. Mackenzie says the average duration of life in his one hundred cases was eight months; the maximum being sixteen months, the minimum five weeks.

As to her alleged long fast, we will simply say that her condition when we examined her did not warrant belief in it.

As to prognosis, we, at that time, predicted her final recovery, and recent developments are justifying this prognosis.

Yours truly,

Oley, Pa. W. F. HERTZOG, M. D.,
Pikesville, Pa. W. D. DELONG, M. D.

November 12, 1890.

Correction.

TO THE EDITOR.

Sir: Your report of my short paper before the New York State Medical Association (REPORTER, November 8, page 537) is very correct; but by mistake it is credited to Dr. McCollom. If it is worth anything, I want the credit; if it is not, then Dr. McCollom does not want the discredit.

Yours truly,

IRA B. READ, M. D.

66 East 126 St., New York.

[We regret the error of one of our New York correspondents, which was due to his want of familiarity with the faces of the speakers at the last meeting of the New York State Medical Association.—ED. REPORTER.]

NOTES AND COMMENTS.

Relation of the Sexual Functions to Mental Disorders of Women.

At a recent meeting of the British Gynæcological Society, Dr. Robert Barnes read a paper in which he said the association of nervous disorders with disease or disordered function of the sexual organs in women was of frequent occurrence. He discussed the influence upon the organism as a whole of the menstrual and climacteric periods, both of which put the nervous system to a severe strain. Consequently any inherited or acquired weakness of that system was peculiarly liable to make itself felt at one or other of those momentous epochs. Many nervous disorders were associated with dysmenorrhœa and disappeared upon the removal of the cause. In other instances the disordered mental condition was associated with "copremia," by which he designated a combination of spanemia and toxemia. He related several examples of the supervention of insanity consequent upon displacements of the uterus, and their relief after suitable local treatment. He then discussed the influence of the removal of the uterus and ovaries in the production of insanity, and considered the propriety of operating when the association of the mental condition and certain disorders of the reproductive organs was such as to justify the assumption that they stood to each other in the relation of cause and effect. More careful examination should be made of the pelvic organs of insane women with the view of endeavoring to remedy any local disease when this was

possible. He particularly insisted upon the necessity for this course in the case of women suffering from puerperal mania.

In discussing the paper Dr. Savage said that it could only be in a very small proportion of cases of insanity in females that any good could be done by treatment directed to the reproductive organs. He raised the question as to whether the confirmed habit of masturbation was the cause or the effect of the mental condition. He insisted upon the diagnostic value of hallucinations of the sense of smell as indicating the coincidence of some affection of the uterus or its annexes. He protested against procuring abortion with the view of cutting short an attack of insanity in pregnant women, or in those who had previously suffered from puerperal mania. He remarked that in physical characteristics the degenerate man tended to approach woman and *vice versâ*, and he asked whether women who presented such masculine features as an abundant growth of hair on the face, etc., were more prone to this kind of break-down, and whether degenerative changes in the reproductive organs were usually associated with any abnormality in this respect.

Dr. Wilks insisted upon the difficulty of distinguishing between what was a constitutional and what a local disorder. He was quite prepared to admit that local causes might determine nervous disorders, and this was peculiarly the case in regard to diseases of the reproductive organs. He intimated his opinion that in all probability confirmed masturbation was the result, or the immediate forerunner, of insanity.

Dr. Hack Tuke, while admitting the influence of disordered menstruation upon the mental functions, said that his experience had taught him that disappointment but too often followed gynæcological treatment in these cases. He instanced the meagre results obtained at certain American asylums where special measures had been taken for the study of the correlationship of the two classes of disorders. At the same time, he said he had met with a number of cases of mania and epilepsy in which he would have liked to have seen oöphorectomy performed. He did not see what objection there could be to performing the operation in such cases. He concurred in the view that it was undesirable to procure abortion in cases of insanity in women.

Dr. Mercier pointed out that any addition to the functions of the body such as occurred at puberty, and any abstraction of functions as by castration, was liable to give rise to more or less serious and permanent disturbance in the distribution of nerve force, the proper play of which was essential to perfect equilibrium.

Concussion of the Spine.

About many subjects in medicine and surgery there lingers much indefinite knowledge. It is partly tradition handed down from one generation and one author to another, and yet it is not thrown aside because of a lack of anything more definite to take its place. It is therefore an agreeable task to chronicle an advance in positive knowledge. In no class of injuries has this been more needed than in those of so-called "concussion." Hitherto the views of Erichsen and Page have been authority, and they undoubtedly contain much that is fundamental and generally admitted to be true. It has been the fortune of an American surgeon, Dr. B. A. Watson, of Jersey City, to supplement these ideas by the published results of an elaborate series of experiments.

In the course of the work one hundred and forty-one dogs were experimented upon. The animals were uniformly dropped twenty-five feet, and were so hoppled in one hundred and thirty-five cases that the blow was delivered on the nates, while the spine formed a nearly perpendicular line to this point. In six other cases the blow was received along the spine, while the head of the animal was sufficiently raised to prevent its coming in contact with the floor. Immediately before each trial a full record was made of the animal's weight, age, sex, pulse, temperature, respiration and of the condition of the pupils. These observations were carefully resumed the day after the trial. Full pathological examinations, in gross and microscopically, were made by Dr. Frank Ferguson.

We can but briefly allude to the well-analyzed results given by Dr. Watson. The injuries received by the animals "were frequently compound and nearly always complicated, while in degree of severity they differed widely, being in some instances quickly fatal and in other cases they were so slight as to be imperceptible either in the *post-mortem* or microscopical examinations." The last record of vital conditions in the animals surviving the fall was made just be-

fore they were killed by chloroform. In 5 cases there were fractures of either the ribs or vertebræ; in 11 an incomplete rupture of the sacro-lumbar ligaments was found, but in every instance some pathological change had resulted also in the cerebro-spinal axis. Quickly fatal results happened in 4 cases. The spinal ligaments were stretched in 5.

Of injuries to the viscera the most frequent was hemorrhagic infarctions of the lungs, 36; then followed, in order, congestion of kidneys, 32; lacerations of liver, 15; ecchymosis of psoas muscles, 7; pneumonic hepatization, 5; hemorrhagic infarctions of liver, 4; and others of less frequent occurrence, including rupture of spleen, 1; of liver, 1; of kidneys, 2; of pelvic blood-vessels with considerable hemorrhage, 2; and of bladder, 1.

Dr. Watson intelligently discusses many of the problems which this series of experiments presents. We deem his conclusions of sufficient importance to present them in outline as follows:

1. Concussive accidents never produce pathological changes in the cord unless great force has been applied to the spine. These cases are generally complicated with vertebral fracture or dislocation, rupture or stretching of vertebral ligaments, or distant injuries so severe as to quickly prove fatal.

2. The symptoms develop immediately and are rarely intensified by morbid changes in the cord; exceptions, fractures, dislocations and slowly developing hemorrhage causing pressure on the cord.

3. It is very difficult to demonstrate stretching of vertebral ligaments on living subjects. The lesion is frequently overlooked on autopsy.

4. Injuries of the cord, with visceral injuries in addition, develop symptoms dependent on the existing complication. The termination of the case rests on the character of the traumatism.

5. Concussive force, though remotely applied, frequently results in the production of severe and even fatal traumatisms in various organs within the three trunk cavities.—*Medical Record*, October 18, 1890.

Strychnine as a Preventive of Tetanus.

The *Bulletin Médical*, September 21, 1890, says that Peyraud, continuing the application of his theory *similia similibus*, not for the cure but for the prevention of infectious diseases, has just communicated to the Bordeaux Medical and Surgical Society some experiments relative to the power of strychnine to prevent tetanus. According to Peyraud, as strychnine acts upon the nervous system in such a manner as to provoke a state altogether similar to that produced by the virus of tetanus, it should put the nerve cells in such a condition that they can no longer react to infection by tetanus. This is his theory.

On April 23, 1889, he made sub-cutaneous injections of a solution of strychnine, containing one-sixtieth of a grain to the fluid drachm, in the case of thirteen rabbits of various weights and ages, but none older than five or six months, the youngest being four months old. A half (Pravaz) syringeful was injected under the skin of the flank. The following day an exactly similar dose was injected. On the 25th, he increased the dose a little (by one division of the syringe-piston). Ten of the animals were seized with convulsions, and three died; three were unaffected. The next day the first dose was resumed. Only two of the animals had convulsions, and on the 27th, three. Tolerance to strychnine injected under the skin does not, therefore, seem to have been established. On the evening of the 27th, he made his inoculations with a little rabbit made tetanic with the powder of hay. This animal had pleurosthotonos so pronounced that it was literally bent double on the inoculated side. He first made six inoculations under the skin of the head, always using a small particle of tissue taken from around the tetanus-bearing wound. He says: "I even scraped with my scalpel the serum and the pus from the wound, and dried this scalpel upon the lips of the inoculation wound, that the inoculation might be quite certain and complete." The small wound was sewed up hermetically. At this time the animal with tetanus died. It was replaced by another in the same condition, but a little less moribund than the preceding, and Peyraud then finished the inoculation of the four remaining dogs poisoned with strychnine, and of two unprotected animals, as a control experiment. Again, a small piece from the wound and the fluids from the rabbit which died of tetanus were used to inoculate two other unprotected animals. Thus fourteen rabbits were inoculated; ten prepared by strychnine, four unprepared, as control experiments. On April 28, Pey-

raud took four of the rabbits injected with strychnine and completed their preparation by a fresh dose of strychnine—a little less than that given on the 27th. One only had some very slight convulsive movements. On May 1, one of these animals was seized with tetanus and died in opisthotonos the following night. Two more died in the next two days, but the fourth, though it showed embrosthotonos and refrained from food for two days, did not die. The protected animals, which did not receive any supplemental injection of strychnine after inoculation remained well except one, which had a slight contracture of the right hind leg. All the animals used for control experiments died of tetanus between the second and fourth days. Peyraud says he has obtained the same results in another series of cases, and he believes his results demonstrate that strychnine has power to prevent tetanus.

Experimental Investigations with Tuberculous Milk.

The *Deutsche Medizinal-Zeitung*, Sept. 25, 1890, contains an abstract from a highly interesting paper by Dr. Bang, of Copenhagen, published in the *Deutsche Zeitschrift für Thiermedicin*, Bd. 17, Heft 1. From fifteen to thirty minims of milk from twenty-eight tuberculous cows with healthy udders were injected into the abdominal cavities of as many rabbits. The milk of only two cows proved infectious. The milk of eight highly tuberculous women produced no evidences of tuberculosis. Abcesses which occurred at the site of innoculation or in the abdominal cavity were not tubercular. Sweet and sour cream, obtained from tuberculous milk containing many bacilli proved virulent. Butter made from the milk (containing many bacilli) of a cow with advanced tuberculosis of the udder, injected into the peritoneum, produced severe tuberculosis. Feeding rabbits with such butter was followed by a like result. The use of butter obtained from tuberculous animals need not therefore be regarded as especially dangerous. The secretion of milk in cows with advanced tuberculosis—at best but slight, is permitted to cease entirely. Besides, such cows rarely supply tuberculous milk, from which by centrifugal action the bacilli are largely removed.

Gebhardt has demonstrated that the danger of infection is in direct proportion to the number of bacilli. These experiments emphasize the necessity of paying careful attention to tuberculosis of the udder. Further investigation demonstrated that the bacilli or their spores are not deprived of their virulence by exposure to a temperature of 176° F. but that for this a temperature of 185° F. seems to suffice. A temperature of 212° F. is absolutely destructive of the bacilli. This statement as to the degree of heat applies to the tuberculous fluid, not to the bath. Two rabbits, fed with tuberculous milk heated to 140°–149° F. showed signs of mild tuberculosis, while of six given the milk unboiled, all succumbed to typical tuberculosis. Rabbits which received milk heated to 158°–167° F. remained absolutely free from infection. A rabbit, fed for seventeen days with unboiled tuberculous milk, which died accidentally, showed only tubercules in the lymphatic glands above the fauces—clinically the primary site of tuberculosis in cattle and swine. Dr. Bang considers it probable that a large proportion of tubercular (scrofulous) affections of the cervical glands in children owe their infection to tuberculous milk.

Tolstoi and Physicians.

Dr. A. B. Holder has in the *Memphis Medical Monthly*, October, 1890, a very interesting short paper on the opinions of Tolstoi about physicians, as contained in his *Kreutzer Sonata*. In concluding the paper, Dr. Holder says:

"Tolstoi is a fanatic; we may go a step further and doubt his sanity. No sane mind would see human nature in such sombre colors; he is morbid; the good men do finds no responsive chord in his mind, or rather as rays of light entering a different medium, are deflected from the straight, so good is deflected and distorted till in his perception it seems evil. This is a form of insanity.

"This miserable pessimist, great man and great mind though he be, finds no good in aught human; its institutions, its governments, its churches, its priests, its professions, its passions and opinions, all are bad; marriage is not only a failure but a sin—a 'legalization of sensuality.' His theories are not new; many years ago I listened with open-eyed wonder while a Shaker Elder from a community in our own

State declared that all love was passion and celibacy the only sinless state. He was gentler and less fanatic and intolerant than the author of the *Kreutzer Sonata*, and I felt there was some truth in his reasoning.

"I have ever doubted if a bit of paper with a seal, and a few words mumbled by an ignorant magistrate, made sexual intercourse between an unloving and ill-mated man and woman less adultery than was the embrace of two young lovers whose prudence in an unguarded moment yields to passion; whether the woman who weds a man for his wealth or position is less an unchaste woman than she who receives her lover without consent of Church or State *for love of him.* I know the world regards them differently; 'honored well are charms to sell, if priests the selling do,' but—I doubt. Still, as it now stands, marriage is the best solution ever yet offered to the great problem, and the man who would endeavor to solve the problem without marriage forgets that it is a human and not an ideal and angelic race he deals with."

Infant Mortality in Chili.

Theodore Child says, in *Harper's Magazine*, November, 1890: The poor alone live in public, either in the unhygienic sheds and cottages of the city, or in the rudimentary cane huts of the suburbs, where the *peones* and their families squat on the ground like wild Indians, and manifest fewer evidences of civilization than the miserablest of the Russian peasantry. For the *peones*, life is truly a question of the survival of the fittest, inasmuch as none but the very strongest can live through the trials of childhood.

Thanks to the fearful dens in which the poorer classes of Chili live, the infant mortality is enormous. On the other hand the *peones* and their women folk are prodigies of hardy endurance; they are indeed the fittest and strongest of their generation, all the weaker having died in the first few months or years of their struggle against insalubrious circumstances and conditions. These infant victims of defective sanitary arrangements do not occasion grief or mourning by their premature departure from this world; their mothers believe that the little souls immediately go to paradise and become angels, and so they are called *angelitos*, and their death is a pretext for rejoicing, and inviting neighbors to drink and dance. The little corpses are kept for days and days; often you will see women in the trains and the horse-cars with dead babies in their laps; the photographers, too, are constantly having infant corpses brought to them to make souvenir portraits. In the country the death of an infant will interrupt work for a week or more. In one village that I happened to visit an epidemic of measles had made half a dozen *angelitos*, and for nearly three weeks no work had been done for many miles around. The whole population had been keeping up a continuous wake, dancing, singing and drinking round the *angelitos*, who were dressed up like church images, and surrounded by burning tapers. This belief in *angelitos* and the custom of wakes also prevails in Peru, Bolivia, and the Argentine.

Treatment of Pelvic Inflammation.

In a paper entitled: "How shall we Treat our Cases of Pelvic Inflammation?" read before the Southern Surgical and Gynecological Association, at its last annual meeting, Dr. R. B. Maury gave a comprehensive résume of the pathology of chronic pelvic inflammation as it has been clearly demonstrated by Bernutz, by Polk, Coe and others, and by the results of abdominal section. This pathology is that of pelvic peritonitis dependent upon tubal disease—not cellulitis. Dr. Maury declared that the term chronic cellulitis is a misnomer—a pathological condition which exists only in the imagination of the physician; a term which has been productive of pernicious results in practice, and which should no longer be used in connection with non-puerpural chronic pelvic inflammation.

When this pathology rests upon such positive and abundant evidence, the question might be asked: Why re-open a discussion upon it now? Because it is evident from our Society proceedings and hospital reports that great confusion exists in the medical mind in regard to it. Dr. Byrne's case, discussed in the New York Obstetrical Society during the present year, was taken as an illustration. In speaking of such cases the great tendency to relapses in chronic pelvic inflammation was illustrated by two cases in which pus tubes were found five and seven years after attacks of peritonitis and when it was supposed the patients were entirely restored to health.

Upon the subject of treatment, Dr. Maury

admitted that by non-surgical therapeutic measures large intra-peritoneal exudations are often absorbed, and that even some tubal and ovarian inflammations entirely disappear and recovery seems complete. But this is the exception and by no means the rule.

For the radical cure of chronic pelvic inflammation non-surgical treatment fails in a majority of the cases. A great many women, suffering to a moderate degree, continue to do so in spite of the best-directed non-surgical measures, and perhaps wisely elect not to undergo operation.

As a rule the only radical and permanent relief is afforded by removal of the diseased appendages. The treatment of pus collections of course requires abdominal section.

Fatty Heart in a Young Subject.

Dr. R. Lowther, M. D., reports in the *British Medical Journal*, October 18, 1890, the following interesting case of fatty degeneration of the heart which is by no means common early in life, though cases have been reported as early as the second year.

A young man, 22 years old, apparently robust, went out for a brisk walk with two friends. After walking two miles they began to hurry, and he suddenly fell down, dying instantly. For three years he had been a footman, and was accustomed to partake largely of animal food three times a day, and of beer in considerable quantities. At the *post-mortem* examination the chest muscles were found thickly covered by adipose tissue. The pericardium had lost entirely its ordinary appearance; it showed no trace of fibrous tissue, but resembled a thin plate of purely fatty character, so friable that it tore when slightly raised. The heart was of normal size, measuring 5 inches by 3½ inches at the base, and had also undergone marked fatty degeneration. Both coronary arteries were embedded in adipose tissue, which shaded off on each side, and only disappeared in the central third of the intracoronary portion of the ventricles. The infiltration in the course of the coronaries penetrated the substance of the muscular tissue to fully two-thirds of its thickness, and these vessels were shrivelled. The heart as a whole was soft and flabby, probably from the presence of interstitial fat. Both auricles and ventricles were fully distended. The endocardium was slightly fatty, and all the valves showed yellow streaks of fatty degeneration. The jugulars also were distended, and the lungs congested. These conditions clearly showed that the heart had ceased to act in systole, death being due to syncope.

Simulo.

Simulo is the *capparis coriacca*, a Peruvian shrub, similar to that of Europe, which furnishes what is known as "capers." The seeds of simulo have been used in the treatment of epilepsy and hysteria.

The *Therapeutic Gazette*, October, 1890, says—quoting the *American Journal of Insanity*, July, 1890—that Dr. V. Paulet reports a number of cases of hysteria treated with simulo, in which it appears to have decidedly good effects. He also employed the drug in a case of ovaritis with severe pain, and one of double pregnancy accompanied by nervous palpitation, violent headache, and complete insomnia, and obtained absolute relief in both cases. As regards its use in epilepsy, he does not think that it can supplant the bromides, but that in some cases and under certain conditions, not very well defined as yet, when the bromides seem inefficacious or contra-indicated, it may be very useful. In one of his cases also chorea was apparently benefited by simulo.

The alcoholic tincture of the drug is a bad form for administration in epilepsy and hystero-epilepsy, since, if given in any quantity, the alcohol may neutralize the good effects. As regards the safety of the medicine, he considers it quite innocuous in large doses. It appears to have, he says, no effect on the pulse or respiration; it causes no depression, no mental excitement, and no disorder of digestion.

Tubercular Pharyngitis.

The *Deutsche Medizinal-Zeitung*, September 25, 1890, contains the following conclusions of Dr. Aigre, as published in *El Siglo Médico*, No. 90, 1889:

Miliary tuberculosis of the pharynx is a rare disease. There is no doubt as to the exciting causes. The affection may exist without a lesion of the larynx. The condition is anatomico-physiologically a subacute or acute tubercular pharyngitis. The lesion appears to concentrate itself upon the mucous membrane and about the glands,

and no disposition is observed to extend deeply to the vessels or between the muscular fibres. Tubercle bacilli are present, with a large number of various other micro-organisms, which take an active part in the ulcerative process. The pains in the ears which so frequently occur probably depend upon an extension of the disease to the Eustachian tube. Infarction of the cervical glands is not a constant symptom. Constitutional treatment is of no avail. Means should be used to relieve the difficulty of deglutition to permit of liberal and full alimentation, as the best treatment of tuberculosis. Local treatment fails. As palliative measures, nutritive enemata and local applications, four or five times daily, of a combination of one part of morphine with twenty-five of glycerine, or of a solution of one part of cocaine to fifty of water, or of a combination of both, are indicated.

Etiology of Croupous Pneumonia.

Mestovitch (*Bolnitchnaya Gazeta Botkina*, June 12, 1890), says that he is convinced by his experimental work that croupous pneumonia is due to a special micrococcus, and gives the following conclusions. The number of phagocytes is considerably increased in animals that are going to recover from infection with the diplococcus and the phagocytes are not present in animals fatally infected.

This fact was demonstrated by introducing the virus sub-cutaneously in a delicately prepared glass prism; after the lapse of a few hours the specimens were examined and the presence or absence of increase in the phagocytes was looked for under the microscope. Cases in which the phagocytes were increased made a good recovery; in those where the increase was absent the results were fatal.

The author has shown experimentally that the phagocytes are of mesodermic origin, and he suggests to the profession to find therapeutic remedies to increase the number of phagocytes, as the latter are the elements that eat away the pathogenic micro-organisms.

Camphor in Florida.

According to the *Druggists' Circular*, October, 1890, the Palatka *Herald* says that A. A. Beach has shown us specimens of distilled camphor from Florida-grown trees, and in his opinion the product is more profitable than any other business in the State. It can be distilled in any season of the year, and heat or cold do not effect it. The camphor tree is of very rapid growth. At four years old this tree attained a diameter of four inches and a height of eight feet, with large top and very thick foliage. The specimens shown us were much stronger than the imported article. Little time is required in distilling, the process being very simple.

Alvarenga Prize of the College of Physicians of Philadelphia.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1891. Essays intended for competition may be upon any subject in Medicine, and must be received by the Secretary of the College on or before May 1, 1891.

NEWS.

—Dr. Alfred Vogel, of Munich, well known for his work on Children's Diseases, died October 9, 1890, in his sixty-first year.

—Dr. Richard C. Norris was elected Registrar of the Obstetrical Department of the Philadelphia Hospital, November 10, 1890.

—The Trustees of a church in Philadelphia recently ordered the discontinuance of ringing the bell out of consideration for sick and nervous people in the neighborhood.

—By the will of the late Thomas C. Sloane, of New York, the Presbyterian Hospital in New York receives $10,000 and the Hospital for Ruptured and Crippled $5,000.

—It is said that Prof. Schrötter, of Vienna, is announced as a rival of Koch in the discovery of a cure-all for pulmonary consumption. Prof. Schrötter's remedy is said to be prussic acid.

—Dr. Delevan Bloodgood, the veteran Medical Director of the United States Naval Laboratory in the Navy Yard, Brooklyn, was sandbagged and robbed at 2 A. M., November 9, 1890.

—Miss Mary Garrett gave a reception in Baltimore, November 14, to ladies and gentlemen of the country who take an interest

in the Women's Medical School of the Johns Hopkins University.

—Dr. Boswell Gorham, a prominent physician, fifty years old, was shot dead by a negro named Duncan, on his farm near Lexington, Ky., November 11. No cause is assigned for the murder.

—The Russian Government has announced that at the end of five years, the decimal system of weights and measures shall be the only legal standard. Great Britain and the United States will then be the only civilized nations which use the ancient systems.

—The New York State Medical Association on October 24 elected the following officers for the ensuing year: President, Dr. Stephen Smith, of New York; Vice-Presidents, Dr. Douglas Ayres, Dr. A. T. Van Vranken, Dr. J. D. Tripp and Dr. Robert J. Meuzin; Members of the Council, Dr. W. D. Gavelock, Dr. J. B. Harris, Dr. George Douglass, Dr. Thomas B. Strong and Dr. A. L. Carroll.

—The N. Y. *World* (Evening Edition) of Nov. 7, says that a "long story" has been published at Newport, Vt., exposing the so-called "Union Medical Institute" of that place, which, it is said, had sold diplomas for $50 each in the West, and upon whose catalogue are given the names of incompetent men as professors with fictitious degrees. It is said that so great is the evidence of fraud against the promoters of the scheme that the matter has been taken up by prominent gentlemen in the State and placed in the hands of lawyers.

—The Southern Surgical and Gynecological Association, in session at Atlanta, November 13 elected the following officers for 1891: President, Dr. L. S. McMurtry, of Louisville, Ky.; Vice-Presidents, W. Gastohe, Atlanta; Dr. J. T. Wilson, of Sherman, Texas. The terms of Dr. W. E. Davis, of Birmingham, Ala., as Secretary, and J. H. Cochrane, of Birmingham, as Treasurer, were continued. The only change in the Judicial Council was the substitution of Dr. George J. Engelman, of St. Louis, for Dr. Bedford Brown, of Alexandria, Va., whose term expired.

OBITUARY.

DR. RICHARD J. LEVIS.

Dr. Richard J. Levis, one of Philadelphia's noted surgeons, died November 12, 1890, at his residence, "Cedarcroft," Kennett, Pa., after a very brief illness. After an attack of influenza from which he appeared to have recovered, he came to town on Saturday, November 8, and on Sunday he again became ill. On Monday pneumonia developed, and at 4.30 A. M., November 12, he expired.

Dr. Levis was 63 years of age, having been born in Philadelphia in 1827. He was a descendant of an old French family, one of which settled here at the time of Penn's occupancy. The father of Dr. Levis was also a physician, and his grandfather, Richard Levis, served as an officer in the Revolutionary army. Coming from a family which, for two centuries, had a representative in the medical profession, Richard J. Levis, upon his graduation from the High School, after having passed through the lower grades of the public schools, was entered as a student at the Jefferson Medical College. He was given private instruction by Professor Mütter, and devoted his studies more particularly to Surgery. In 1848 he graduated and at once commenced the practice of medicine and surgery, rapidly building up a lucrative practice. In 1859 he was appointed Surgeon to the Philadelphia Hospital. Shortly afterwards he was appointed surgeon to the Wills Eye Hospital, a position he filled actively for fourteen years, and at the time of his death was Emeritus Surgeon. In 1871 he was elected surgeon to the Pennsylvania Hospital, a position he held until 1885. In 1877, he was elected surgeon and lecturer on clinical surgery at the Jefferson College Hospital, serving this institution for ten years. He was one of the organizers of the Philadelphia Polyclinic and College for Graduates in Medicine, was President of the Board of Trustees, as well as Professor of Surgery. For twenty years he was surgeon of the Jewish Hospital. Among other positions filled by him were the Presidency of the Medical Society of Pennsylvania in 1885, and the Presidency of the Philadelphia County Medical Society in 1885-86.

On January 1, 1859, Dr. Levis became one of the Editors and co-proprietors of the MEDICAL AND SURGICAL REPORTER. His withdrawal from this connection was announced in the issue of March 21–28, 1863. He was always interested in the success of this Journal, and was a warm and respected personal friend of its present Editor.